

TYPE 1 PROGRESS REPORT  
ERTS-A

- a. Title: Monitor Weather Conditions for Cloud Seeding Control  
ERTS-A Proposal No.: 642
- b. GSFC ID No. of P.I.: IN 024
- c. For the period from July 1, 1973, through August 30, 1973:  
There are no problems impeding the progress of this investigation.
- d. Progress during this period and plans for next reporting period:

1. The two summertime stations - Wolf Creek North and Wolf Creek Pass - have been working satisfactorily throughout the period.

Very little maintenance or repair work was required during the summer period since no problems were encountered at either of the two installations. On September 10, a servicing trip was scheduled to Wolf Creek Pass site when ERTS-received data indicated that the precipitation accumulation gage needed to be emptied and recharged. The data which led to the decision to empty the gage are given in Table 1. Note that gage servicing was accomplished between 1621 and 1758 gmt (1021 to 1158 mdt) on September 10.

2. During the upcoming season, five stations will be re-established at: Muleshoe, Lime Mesa, Runlett, Castle Creek, and Palisade Lake. Precipitation gages will be located at Lime Mesa, Palisade Lake, Castle Creek, and Wolf Creek Pass to facilitate precipitation measurement throughout the barrier of the cloud seeding target area.

All stations will be equipped with recharged gel-cell batteries. However, Wolf Creek Pass battery will remain unchanged to monitor longevity and help bring about scheduling of replacement of batteries at all sites.

3. On September 25, 1973, Western Scientific Services, Inc., installed the first of five new sites. The Pagosa Peak station was relocated to Palisade Lake and checkout was begun. See Table 2 and Map 1.

4. A redesign of the temperature aspirators is being made to minimize solar effect and will be in service at the time of installation at all sites which require temperature measurements.

(E73-11071) MONITOR WEATHER CONDITIONS  
FOR CLOUD SEEDING CONTROL Progress  
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NASA-CR-135540

# MONITOR WEATHER CONDITIONS FOR CLOUD SEEDING CONTROL

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September 30, 1973

Type I Progress Report for Period July 1, 1973, through  
August 30, 1973

Prepared for:

Goddard Space Flight Center  
Greenbelt, MD 20771

5. The platform visibility will be taken for each site for hard and soft obstacles (trees). These data will be compared with the platform visibility statistics of orbits per day and messages per orbit. An effort will be made to determine what value theodolite observations are in predicting the platform visibility statistics.

e. Significant results during the last reporting period:

Wolf Creek Pass and Wolf Creek North were exposed to general public throughout the summer tourist season and have both come out unmolested. However, a future period of mid-September to mid-November, hunting season, will tell if the green antenna dome is a suitable target.

f. Publications: None

g. Recommendations: None

h. Changes in standing order forms: None

i. ERTS image descriptor forms: N. A.

j. No changes were made in data request forms during the reporting period.

k. Three DCS platforms are in place. Two are operational and one is in the checkout mode. The remaining four are being prepared for installation.

Table 1

Wolf Creek Pass ERTS Data: September 4 - September 11

WLFCRP 20:16 CSS TUE.09/11/73

100 6241	WOLF CREEK PASS											
110 DATE	HHMM	SS	C	TEM	TVO	TVO	TVO	PCP	TVO	HSV	BAV	
120				C	BIT	BIT	BIT	IN.	BIT	V	V	
500 SEP 3 73 1733 46	7	13.1	0.0	0.0	0.0	10.8	0.0	2.5	12.6			
510 SEP 5 73 1736 58	7	13.4	0.0	0.0	0.0	10.8	0.0	2.5	12.6			
520 SEP 6 73 0317 33	7	7.2	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
530 SEP 6 73 0320 56	7	7.2	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
540 SEP 6 73 0324 20	7	6.9	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
550 SEP 6 73 0500 11	7	5.3	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
560 SEP 6 73 0503 38	7	5.0	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
570 SEP 6 73 1551 10	7	12.7	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
580 SEP 6 73 1554 23	7	12.7	0.0	0.0	0.0	10.8	0.0	2.5	12.6			
590 SEP 7 73 0325 33	7	4.0	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
600 SEP 7 73 0329 00	7	4.0	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
610 SEP 7 73 0506 10	7	3.7	0.0	0.0	0.0	10.8	0.0	2.5	12.4			
620 SEP 7 73 0509 39	7	3.7	0.0	0.0	0.0	10.8	0.0	2.5	12.4			
630 SEP 7 73 1601 14	7	13.1	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
640 SEP 7 73 1739 07	7	14.7	0.0	0.0	0.0	10.8	0.0	2.5	12.6			
650 SEP 7 73 1742 16	7	14.7	0.0	0.0	0.0	10.8	0.0	2.5	12.6			
660 SEP 7 73 1745 25	7	14.7	0.0	0.0	0.0	10.8	0.0	2.5	12.6			
670 SEP 8 73 0329 11	7	7.6	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
680 SEP 8 73 0332 36	7	7.2	0.0	0.0	0.0	10.8	0.0	2.5	12.5			
690 SEP 8 73 0336 01	7	7.2	0.0	0.0	0.0	87.2	0.0	20.1	95.6			
700 SEP 8 73 0512 09	7	5.0	0.0	0.0	0.0	10.8	0.0	2.5	12.4			
710 SEP 8 73 0515 37	7	5.0	0.0	0.0	0.0	10.8	0.0	2.5	12.4			
720 SEP 8 73 1604 01	7	10.2	0.0	0.0	0.0	10.9	0.0	2.5	12.5			
730 SEP 8 73 1607 18	7	10.2	0.0	0.0	0.0	10.9	0.0	2.5	12.5			
740 SEP 8 73 1747 42	7	12.1	0.0	0.0	0.0	10.9	0.0	2.5	12.5			
750 SEP 8 73 1750 55	7	12.1	0.0	0.0	0.0	10.9	0.0	2.5	12.5			
760 SEP 8 73 1754 09	7	12.1	0.0	0.0	0.0	10.9	0.0	2.5	12.5			
770 SEP 10 73 0342 16	7	7.9	0.0	0.0	0.0	10.9	0.0	2.5	12.4			
780 SEP 10 73 0345 42	7	7.9	0.0	0.0	0.0	10.9	0.0	2.5	12.4			
790 SEP 10 73 0521 59	7	7.2	0.0	0.0	0.0	10.9	0.0	2.5	12.4			
800 SEP 10 73 0525 26	7	7.2	0.0	0.0	0.0	10.9	0.0	2.5	12.4			
810 SEP 10 73 0528 53	7	6.9	0.0	0.0	0.0	10.9	0.0	2.5	12.4			
820 SEP 10 73 1614 02	7	4.3	0.0	0.0	0.0	11.2	0.0	2.5	12.4			
830 SEP 10 73 1614 02	7	4.3	0.0	0.0	0.0	11.2	0.0	2.5	12.4			
840 SEP 10 73 1617 31	7	4.3	0.0	0.0	0.0	11.2	0.0	2.5	12.4			
850 SEP 10 73 1617 31	7	4.3	0.0	0.0	0.0	11.2	0.0	2.5	12.4			
860 SEP 10 73 1621 01	7	4.3	0.0	0.0	0.0	11.2	0.0	2.5	12.4			
870 SEP 10 73 1758 46	7	5.6	0.0	0.0	0.0	2.0	0.0	2.5	12.4			
880 SEP 10 73 1802 14	7	5.6	0.0	0.0	0.0	2.0	0.0	2.5	12.4			
890 SEP 11 73 0347 23	7	3.0	0.0	0.0	0.0	2.5	0.0	2.5	12.4			
900 SEP 11 73 0350 54	7	3.0	0.0	0.0	0.0	2.5	0.0	2.5	12.4			
910 SEP 11 73 0529 22	7	1.7	0.0	0.0	0.0	2.6	0.0	2.5	12.4			
920 SEP 11 73 0532 53	7	1.7	0.0	0.0	0.0	2.6	0.0	2.5	12.4			

Table 2

ERTS PROGRAM  
Recommended Changes in Station Configuration

Old Configuration		New Configuration	
Site	Parameters	Site	Parameters
Muleshoe	Rime ice Temperature Wind speed Wind direction Radiation Battery voltage Humidity Muleshoe battery	Muleshoe	No change No change No change No change No change No change No change No change
Wolf Creek North	Streamflow Water temperature Battery voltage	Wolf Creek North	Increase resolution No change No change
Wolf Creek Pass	Temperature Precipitation Battery voltage	Wolf Creek Pass	Radiation shield No change No change
Molass Divide	Temperature Precipitation Battery voltage	Lime Mesa	Radiation shield No change No change
Runlett Park	Temperature Wind speed Wind direction Relative humidity Battery voltage	Runlett Park	No change No change No change No change No change
Devil Mountain	Temperature Wind speed Wind direction Battery voltage	Castle Creek (INSTAAR)	Radiation shield Omit Omit Omit Add precipitation
Pagosa Peak	Temperature Snow pillow Battery voltage	Palisade Lake	Radiation shield Snow pillow Battery voltage Add precipitation

ERTS PROGRAM  
RECOMMENDED CHANGES IN STATION LOCATIONS

